CRUISE ANNOUNCEMENT

Charter Vessel F/V *Ocean Explorer* 2002-01

The chartered vessel F/V *Ocean Explorer* will depart Dutch Harbor, Alaska, on June 15, 2002 to evaluate short-term impacts of bottom trawls on soft-bottom benthic habitats and to describe the recovery process. This is a continuation of a multi-year project which began in 2001 and which follows earlier studies of long-term bottom trawling impacts in the same general area. The F/V *Ocean Explorer* will complete this study on or about June 29 in Dutch Harbor, Alaska.

The field work is a cooperative effort with the the Naval Undersea Warfare Center (Keyport, Washington). Other collaborators include the University of New Hampshire - NOAA Center for Coastal Ocean Mapping / Joint Hydrographic Center (Durham, New Hampshire), the University of Alaska Fairbanks, Institute of Marine Science (Fairbanks, Alaska), Klein Associates, Inc. (Salem, New Hampshire), B&N Fisheries (Seattle, Washington), the Groundfish Forum (Seattle, Washington), and Triton-Elics International (Watsonville, California and Portland, Oregon).

AREA OF OPERATION

The study area is within the Crab and Halibut Protection Zone 1 in Bristol Bay (Management Area 512: approximately lat. 58ºN and long. 161ºW, Fig. 1).

OBJECTIVES

The research objectives address Congressional mandates (Magnuson-Stevens Fishery Conservation and Management Act of 1996) to investigate potential adverse impacts of fishing gear on essential fish habitats. The primary objectives of this study

are to determine if bottom trawls have measurable and significant effects on soft-bottom habitat in the eastern Bering Sea and, if so, are there fundamental changes which define a recovery state.

Secondary objectives are to:

1. incorporate an ultra-short baseline (USBL) positioning system to monitor range and bearing of sampling in real time;

2. conduct side scan sonar assessments of the seafloor;

3. collect epifauna, infauna and surficial sediment samples; and

4. collect underwater video to groundtruth side scan imagery and to assess the benthos and sampling gear efficiency.

METHODS AND GEAR

Paired experimental and control trawl corridors will be randomly sampled at preselected stations one year after experimental trawling with commercial gear. The sampling will consist of integrated biological and geological sampling to characterize benthic organisms and seafloor characteristics.

The commercial gear used during the impact phase in 2001 was a Nor'eastern Trawl System (NETS) Inc. 91/140 two-seam Aleutian combination otter trawl with a 14" diameter footrope. It was rigged and deployed in a manner that is consistent with standard practices of the fleet.

The standard NMFS 83/112 bottom trawl, modified to improve capture and retention of small macroinvertebrates, will be used to sample the epifaunal organisms. All invertebates collected will be completely sorted to species, weighed and enumerated.

A $0.1m^2$ van Veen grab will be used to collect quantitative samples of infaunal invertebrates. A secondary grab sample at each station will be used to characterize physical and chemical properties of the surficial sediments.

A Klein 5410 side scan sonar system[1] will be used to collect backscatter and swath bathymetry data in the study area.

A color video system attached to the trawl will provide a

[1]Reference to trade names or commercial firms does not constitute U.S. government endorsement.

qualitative assessment of the benthos and performance of the gear.

ITINERARY

June 15 Charter begins in Dutch Harbor
June 29 Charter ends and vessel offloads in Dutch Harbor

SCIENTIFIC PERSONNEL SCHEDULE

B. McConnaughey	Field Party Chief	AFSC/S
T. Sample	Fishery Biologist	AFSC/S
K. Smith	Fishery Biologist	AFSC/S
B. Dieter	Biological Technician	AFSC/S
L. Huff	Senior Hydrographer	NOAA/UNH
M. Farnam	U/W Systems technician	NUWC
B. Bunge	U/W Systems technician	NUWC
T. Jamison	U/W Systems technician	NUWC

Affiliations of Scientists:

AFSC/S - Alaska Fisheries Science Center, Seattle, Washington
NOAA/UNH - NOAA-Univ. of New Hampshire Joint Hydrographic Center
NUWC - Naval Undersea Warfare Center, Division Keyport

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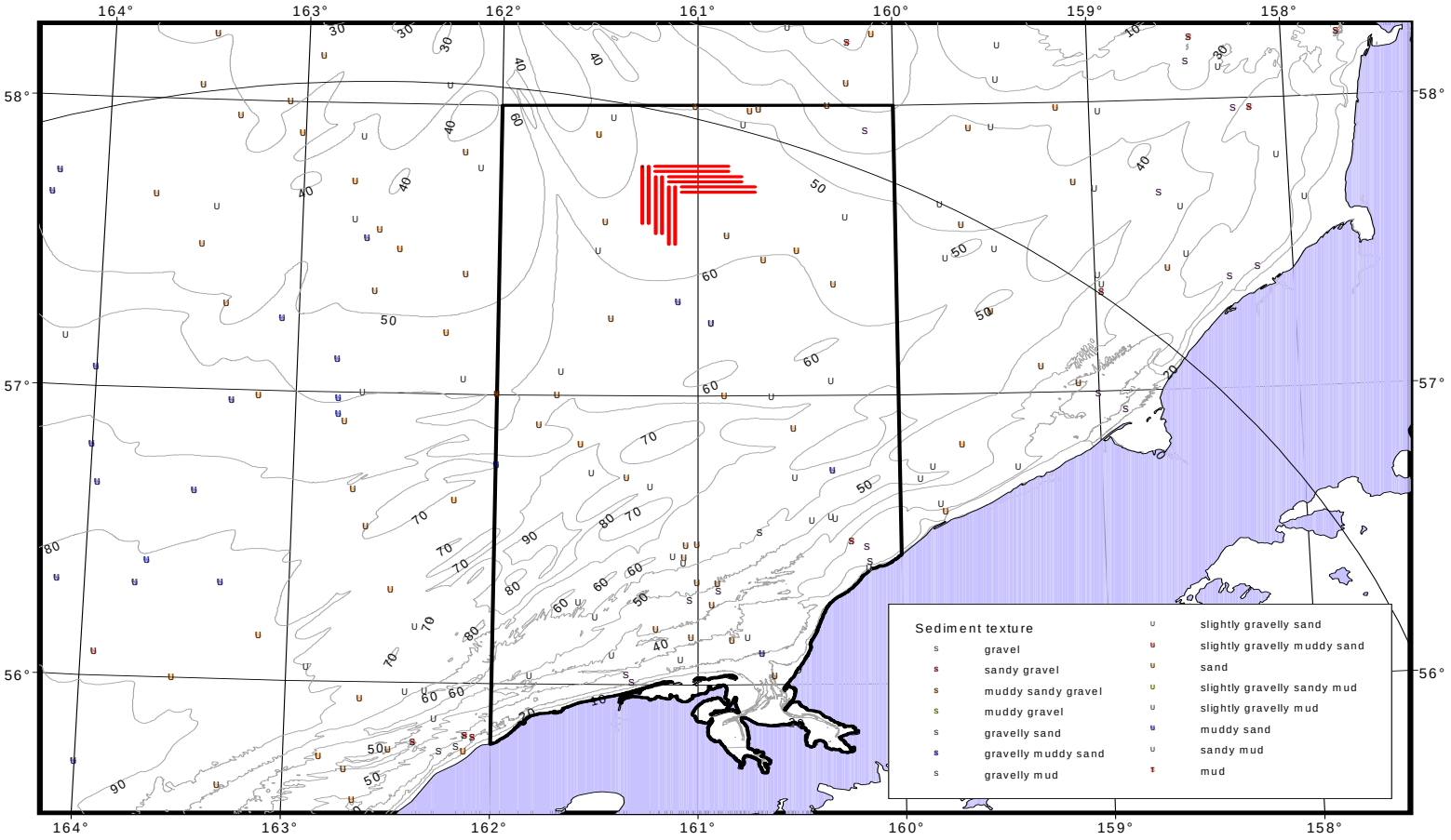

Figure 1. Location of Trawlex research corridors within the Crab and Halibut Protection Zone 1 in the Bristol Bay area of the eastern Bering Sea. Six experimental-control corridor pairs will be resampled during the summer 2002 cruise. Depths in meters and sediment textures are indicated, as well as an arc indicating the advertised 180 nm broadcast radius for the U.S. Coast Guard differential GPS beacon located at Cold Bay, Alaska.